Dual Triode—Sharp-Cutoff Pentode

Dual Triode Has High-Mu Unit & Medium-Mu Unit

DUODECAR TYPE

GENERAL DATA

Electrical:

Heater Characteristics and Ratings *(Design-Maximum Values)*:			
Voltage (AC or DC)	6.3 ± 0.6		volts
Current at heater volts = 6.3	1.050		amp
Peak heater-cathode voltage (Each unit):			
Heater negative with respect to cathode	200	max.	volts
Heater positive with respect to cathode	200[a]	max.	volts
Direct Interelectrode Capacitances:[b]			
Triode Unit No.1:			
Grid to plate	1.9		pf
Grid to cathode, cathode of triode unit No.2 & internal shield, pentode cathode & pentode grid No.3 & internal shield, and heater.	3.0		pf
Plate to cathode, cathode of triode unit No.2 & internal shield, pentode cathode & pentode grid No.3 & internal shield, and heater.	2.2		pf
Triode Unit No.2:			
Grid to plate	3.6		pf
Grid to cathode & internal shield, pentode cathode & pentode grid No.3 & internal shield, and heater.	2.4		pf
Plate to cathode & internal shield, pentode cathode & pentode grid No.3 & internal shield, and heater.	3.8		pf
Pentode Unit:			
Grid No.1 to plate	0.11		pf
Grid No.1 to cathode of triode unit No.2 & internal shield, cathode & grid No.3 & internal shield, grid No.2, and heater	9.5		pf
Plate to cathode of triode unit No.2 & internal shield, cathode & grid No.3 & internal shield, grid No.2, and heater	4.4		pf
Pentode plate to plate of triode unit No.2	0.044	max.	pf
Plate of triode unit No.1 to plate of triode unit No.2	0.06	max.	pf

6AS11

Characteristics, Class A$_1$ Amplifier:

Triode Units

	Unit No.1	Unit No.2	
Plate Supply Voltage	200	200	volts
Grid Voltage	-2	–	volts
Cathode Resistor	–	220	ohms
Amplification Factor	68	41	
Plate Resistance (Approx.)	12400	9400	ohms
Transconductance	5500	4400	μmhos
Plate Current	7	9.2	ma
Grid Voltage (Approx.) for plate μa = 10	-5.5	–	volts
Grid Voltage (Approx.) for plate μa = 100	–	-6.5	volts

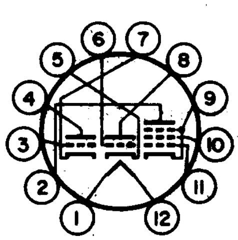
Pentode Unit

Plate Supply Voltage	200	volts
Grid-No.2 Supply Voltage	125	volts
Cathode Resistor	68	ohms
Plate Resistance (Approx.)	70000	ohms
Transconductance	10500	μmhos
Plate Current	24	ma
Grid-No.2 Current	5.2	ma
Grid-No.1 Voltage (Approx.) for plate μa = 100	-8	volts

Mechanical:

Operating Position. . . . . Any
Types of Cathodes . . . . Coated Unipotential
Maximum Overall Length. . . . . 2.375"
Seated Length . . . . 1.750" to 2.000"
Diameter. 1.062" to 1.188"
Bulb. T9
Base. . . . . .Small-Button Duodecar 12-Pin (JEDEC No.E12-70)
Basing Designation for BOTTOM VIEW. 12DP

Pin 1 - Heater
Pin 2 - Pentode Plate
Pin 3 - Grid of Triode Unit No.2
Pin 4 - Plate of Triode Unit No.2
Pin 5 - Cathode of Triode Unit No.1
Pin 6 - Grid of Triode Unit No.1
Pin 7 - Cathode of Triode Unit No.2, Internal Shield



Pin 8 - Plate of Triode Unit No.1
Pin 9 - Pentode Cathode, Pentode Grid No.3, Internal Shield
Pin 10 - Pentode Grid No.2
Pin 11 - Pentode Grid No.1
Pin 12 - Heater

AMPLIFIER — Class A_1

Maximum Ratings, *Design-Maximum Values:*

Triode Units

	Unit No.1	Unit No.2	
PLATE VOLTAGE	330 max.	330 max.	volts
GRID (CONTROL-GRID) VOLTAGE:			
Positive-bias value	0 max.	0 max.	volts
PLATE DISSIPATION	1.5 max.	2 max.	watts

Pentode Unit

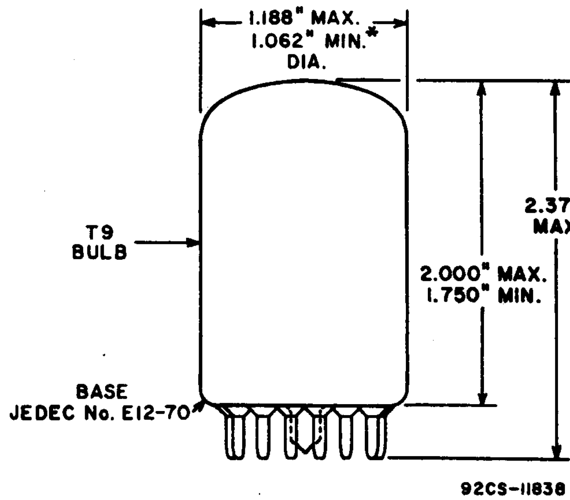
PLATE VOLTAGE	330 max.	volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE	330 max.	volts
GRID-No.2 VOLTAGE	See *Grid-No.2 Input Rating Chart* at front of Receiving Tube Section	
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Positive-bias value	0 max.	volts
GRID-No.2 INPUT:		
For grid-No.2 voltages up to 165 volts	1.1 max.	watts
For grid-No.2 voltages between 165 and 330 volts	See *Grid-No.2 Input Rating Chart* at front of Receiving Tube Section	
PLATE DISSIPATION	5 max.	watts

Maximum Circuit Values:

Values are for Each Unit

	Triode Units	Pentode Unit	
Grid-No.1-Circuit Resistance:			
For fixed-bias operation	0.5 max.	0.25 max.	megohm
For cathode-bias operation	1 max.	1 max.	megohm

[a] The dc component must not exceed 100 volts.
[b] Without external shield.



* APPLIES TO MINIMUM DIAMETER EXCEPT IN AREA OF SEAL.